CITY OF RIO VISTA
One Main Street, Rio Vista, California 94571
Phone: (707) 374-6451 Fax: (707) 374-6763

April 19, 2010

Mr. James Marshall
Senior Engineer
California Regional Water Quality Control Board
Central Valley Region
11020 Sun Center Drive #200
Rancho Cordova, CA 95670

Dear Mr. Marshall:

On behalf of the City of Rio Vista, we appreciate the opportunity to review the City's Tentative Order NPDES permit for the Northwest Wastewater Treatment Facility (NWWTF). We also appreciate that you and Elizabeth Lee took the time to meet with us on April 12, 2010 to discuss the Tentative Order. As we discussed on the 12th, we appreciate the changes made to the Administrative Draft of the permit but there are still a few issues that need to be resolved.

Our comments are discussed below under the following topics:

- Turbidity
- Dilution
- Monitoring Requirements
- Monitoring Location
- Resources
- Correction

Turbidity

Section VI.C.4.a of the Tentative Order and Section IX.C. of the Monitoring and Reporting Program (Attachment E) include minimum UV dosage and turbidity specifications associated with ensuring adequate disinfection of wastewater to protect beneficial uses. The specifications are a minimum UV dosage of 80 (mJ/cm2) and turbidity that is less than 0.2 NTU over a 24-hour period, less than 0.5 NTU for 5% of the time over a 24-hour period, and less than 1 NTU at all times. These are more stringent than the specifications seen in other Central Valley permits and are based on the National Water Research Institute (NWRI) and American Water Works Association Research Foundation NWRI/AWWRF's *Ultraviolet Disinfection Guidelines for Drinking Water and Water Reuse"* first published in December 2000 and revised as a Second Edition

dated May 2003. It should be noted that these specifications were developed for drinking water and recycled water, which infers that the treated water is applied without dilution or further treatment. The fact sheet also refers to a Memorandum dated 1 November 2004 issued by Department of Public Health (DPH) to Regional Board executive officers. This memorandum also discusses UV disinfection only as it applies to water recycling treatment plants.

The NWWTF discharges to surface water and receives a minimum of 20:1 dilution. Currently, none of the NWWTF effluent is used for reclamation and there is no reclamation program in place. The recently adopted Thunder Valley Wastewater Treatment Plant permit (Order No. R5-2010-0005) which also contains these more stringent turbidity requirements is for a facility that recycles a portion of its effluent and the permit contains the corresponding reclamation specifications (R5-20010-005, Section IV.C.). There is no corresponding set of specifications in the NWWTF Tentative Order.

The City will conduct a Reclamation Study as required under Provision VI.C.2.b. of the Tentative Order and, as discussed with you previously, the City requests that the Title 22 requirements associated with reclamation be eliminated from the permit until this study is completed and such time that the NWWTF actually implements a reclamation program. Specifically, the City requests that the UV dose be changed to 100 (mJ/cm2) with the corresponding turbidity requirements of less than 2 NTU over a 24-hour period, less than 5 NTU for 5% of the time over a 24-hour period, and less than 10 NTU at all times as contained in the Administrative Draft Order.

In addition, the City currently monitors turbidity of the individual MBR process trains for the NWWTF and it is unknown if the effluent turbidity requirements in the Tentative Order are achievable. The City will agree to begin monitoring turbidity within 120 days of permit adoption (to allow time to obtain and install the necessary monitoring equipment). Because turbidity is associated with the operation of the disinfection process, it is requested that the monitoring location for turbidity be located prior to UV disinfection. This will monitor turbidity of the combined effluent prior to UV disinfection and not individual MBR trains.

Dilution

In Section IV.C.2.d. of Attachment F (Fact Sheet), it is noted that dilution credit of 20:1 has been allowed for the NWWTF discharge. However, dilution is not applied for all constituents with final effluent limits. Specifically, it is noted in the fact sheet that there is assimilative capacity for ammonia (p. F-40 in Attachment F) and for nitrate plus nitrite (p. F-45 in Attachment F).

For ammonia, the acute criterion is 2.14 mg/L and the chronic criterion is 1.93 mg/L. The maximum observed effluent concentration is 0.36 mg/L, which is well below the chronic criterion. The Fact Sheet notes that the finding of reasonable potential (RP) is based on the potential to violate the Basin Plan narrative toxicity objective. However, all acute bioassay results show 100% survival in effluent and there has been no indication of

chronic toxicity. The NWWTF is a high performance, state of the art MBR and UV treatment plant. There is no indication that there is potential for toxic amounts of ammonia to be discharged from this plant.

The City requests that a dilution credit of 20:1 be allowed in the derivation of ammonia effluent limits. The resulting effluent limits would be 19 mg/L for the AMEL and 39 mg/L for the MDEL. The City requests that these effluent limits be used instead of those currently in the Tentative Order.

For nitrate plus nitrite, the maximum observed effluent concentration for nitrate is 47 mg/L, which is above the criteria of 10 mg/L. The Fact sheet also notes that, while the maximum effluent concentration appears to be an outlier, there is limited nitrate data. Because there is insufficient data to definitively determine that the City can consistently comply with the AMEL of 10 mg/L, the City requests that a dilution credit of 20:1 be allowed. The resulting effluent limit would be an AMEL of 210 mg/L. The City requests that these effluent limits be used instead of the ones currently in the Tentative Order.

Monitoring Requirements

As discussed on April 12th, monitoring requirements associated with turbidity (Table E-3) and the emergency storage basin (IX .B. on p. E-12) will require the City to obtain and install additional equipment. In addition, monitoring requirements for the volume of water in Emergency Storage Basin (ESB) may be infeasible. Therefore, the City requests that the monitoring requirements for turbidity and the ESB become effective 120 days after adoption of the permit to allow time to complete installation of the needed equipment.

In addition, it is requested that the requirement to record 'total volume of wastewater directed to the ESB basin' be changed to 'approximate volume based on level measured in the ESB basin.'

Monitoring Locations

As discussed previously, the City is striving for consistency in the receiving water monitoring locations for the NWWTF and BWWTF in order to optimize its resources. To this end, the City provided a revised map of the monitoring locations to replace the map in Attachment B. The City has made revisions to the wording on the map to match the wording in Table E-1 of Attachment E. These changes are shown in Attachment 1 and the City requests that the map in Attachment 1 replace the current map in Attachment B of the Tentative Order.

Please change the river sample site descriptions on Attachment B – Map to be the same description as the table on page E-3:

RSW-001:

Approximately 250 feet upstream and 80 feet offshore of Discharge Point No. 001 of the diffuser (Latitude: 38° 10' 06"N; Longitude: 121° 40' 42"W)

RSW-002:

Approximately 1 mile downstream and 80 feet offshore of Discharge Point No. 001 near Hwy 12

Resources

While the City is committed to implementing the Tentative Order with the changes requested above to the best of our ability, we are very concerned that the City's limited resources will make it difficult to implement several of the changes discussed above including the additional equipment that will need to be purchased and installed to monitor turbidity and to monitor discharges to the ESB. In addition, we are concerned that the required studies including the Reclamation Study and the Salinity Evaluation and Minimization Plan may also be beyond our current resources. We would appreciate the opportunity to meet with you to discuss this issue in more detail and to determine if there are approaches available that would minimize the cost to the City.

Correction

Please replace 'Veolia West Operating Services, Inc.' with 'Veolia Water West Operating Services Inc.' throughout the document.

Thank you again for this opportunity to review the Tentative Order. Please, do not hesitate to contact me or Chris McAuliffe should you have any questions or concerns regarding these comments.

Sincerely,

Hector De La Rosa
City Manager, City of Rio Vista

Encl.

Cc: Chris McAuliffe, Veolia West Operating Service, Inc.
Betsy Elzufon, LWA
Tom Grovhoug, LWA
Elizabeth Lee, CVRWQCB

Attachment 1: Revised Map for Attachment B